



Fundamentally Based Portfolio Weighting Models: A Multi-Factor Approach

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- **Study Purpose:**

Determine if a fundamentally-weighted multi-factor model outperforms the market

- **Weighting Factors:**

1. Price to Book (P/B)
2. Price to Sales (P/S)
3. Price to Earnings (P/E)
4. Price to Cash Flow (P/CFL)
5. Earnings Growth (EG)

- **Weighting Model:**

Example:

$$WP/Bi = \frac{Avg. P/B}{P/B(i)}$$

$$MFWi = WP/Bi + WP/Si + WP/Ei + WP/CFLi + WEGi$$

- **Weighting Model Adjustments:**

Original Multi-Factor weighting model adjusted to give higher weight to the Price to Sales factor

Periods of Analysis: 2014

Sectors Analyzed:

- XLV = Healthcare
- XLP = Consumer Staples
- XLY = Consumer Discretionary

Table 1

Performance Summary (%)					
Sector	Sector Rtn.	S&P Rtn.	Multi-Factor	1st Stage Adj.	2nd Stage Adj.
XLV	23.34%	11.74%	22.42%	24.28%	36.86%
XLY	7.96%	11.74%	17.80%	19.18%	24.14%
XLP	15.72%	11.74%	16.55%	17.74%	21.69%

Table 2

Performance Summary (Millions)			
Sector	Multi-Factor	1st Stage Adj.	2nd Stage Adj.
XLV	\$ 6.1	\$ 6.20	\$ 6.90
XLY	\$ 5.8	\$ 5.90	\$ 6.20
XLP	\$ 5.9	\$ 6.00	\$ 6.10
Org. Inv	\$ 5.00	\$ 5.00	\$ 5.00

- **Conclusions**

- (1) Multi-Factor model for XLV, XLY, XLP outperforms the market
- (2) 1st Stage and 2nd Stage Adj. models also outperform the market
- (3) Best model is the 2nd Stage Adj. model
- (4) Original investment of \$5,000,000 in 2nd Stage Adj. model generates \$1.9M in dollar return